

Mineral Industry Surveys

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COBALT IN NOVEMBER 2006

U.S. cobalt consumption during January through November 2006 was slightly lower than that consumed during the first 11 months of 2005, according to the U.S. Geological Survey.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 4% higher in January through October 2006 than that imported during the same period in 2005. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 18% higher in January through October 2006 than that exported during the same period in 2005.

Update

Prices for electrolytic cobalt, in dollars per pound from

Platts Metals Week, are listed below.

<u>Date</u>	<u>Price range</u>
December 14	27.50-29.00
December 21	26.50-27.00
December 28	26.00-27.00
January 4	25.00-27.00
January 11	25.00-26.00

<u>Month</u>	<u>Average price</u>
December	27.38

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2005:				
November	310	146	174	630
December	312	147	164	622
January-November ^r	3,480	1,710	1,860	7,040
January-December ⁴	3,790	1,850	2,020	7,660
Year ⁵	4,550	1,860	2,030	8,430
2006:				
January	323	149	173	646
February	316	151	167	633
March	320	153	172	645
April	298	146	175	619
May	314	161	180	655
June	309	156	168	633
July	304	148	161	613
August	308	158	179	644
September	298	151	179	628
October	301	155	179	635
November	306	145	179	630
January-November	3,400	1,670	1,910	6,980

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes metal powder.

³Data may include other cobalt materials.

⁴Data based on monthly reports.

⁵Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE¹

(Metric tons, contained cobalt)

End use	2005			2006	
	January- November	January- December ²	Year ³	November	January- November ⁴
Steel	654 ^r	714	857	57	628
Superalloys	3,300 ^r	3,590	4,140	307	3,330
Magnetic alloys	263 ^r	287	337	23	268
Other alloys ⁵	W	W	227	W	W
Cemented carbides ⁶	697 ^r	761	763	60	668
Chemical and ceramic uses ⁷	1,870 ^r	2,040	2,040	160	1,840
Miscellaneous and unspecified	250 ^r	272	63	23	250
Total	7,040 ^r	7,660	8,430	630	6,980

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data based on monthly reports.

³Includes annual reports.

⁴Includes revisions to prior months' data.

⁵Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁶Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁷Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Industry ²			Total	U.S. Government, metal ⁵
	Metal ³	Oxide and other chemical compounds ⁴	Scrap		
2005:					
November	294	192	64	549	1,560
December ⁶	296	189	70	555	1,550
Yearend ⁷	383	209	72	664	1,550
2006:					
January	311	187	80	578	1,520
February	321	183	81	585	1,500
March	335	176	84	595	1,480
April	339	173	74	586	1,480
May	334	183	57	574	1,480
June	340	170	65	575	1,480
July	336	169	69	573	1,470
August	328	167	65	560	1,470
September	327	183	65	575	1,470
October	316	174	65	554	1,420
November	309	173	65	547	1,300

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks reported by cobalt processors and consumers.

³Includes metal powder.

⁴Data may include other cobalt materials.

⁵Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁶Data based on monthly reports.

⁷Includes annual reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2005:								
October	846,000	\$26,500,000	111,000	\$2,610,000	237,000	\$2,640,000	1,010,000	9,390,000
November	971,000	28,300,000	116,000	2,790,000	158,000	1,840,000	1,120,000	10,500,000
December	379,000	11,000,000	108,000	2,380,000	271,000	2,850,000	555,000	11,100,000
January-October	8,000,000	273,000,000	1,090,000	30,000,000	1,770,000	20,100,000	9,390,000	XX
January-December	9,350,000	312,000,000	1,310,000	35,100,000	2,200,000	24,800,000	11,100,000	XX
2006:								
January	906,000	25,000,000	79,300	1,890,000	245,000	2,830,000	1,060,000	1,060,000
February	571,000	15,600,000	102,000	2,200,000	317,000	3,720,000	775,000	1,830,000
March	1,160,000	30,300,000	115,000	2,620,000	196,000	2,230,000	1,320,000	3,150,000
April	942,000	26,500,000	121,000	2,850,000	165,000	1,640,000	1,090,000	4,240,000
May	640,000	19,300,000	102,000	2,360,000	195,000	2,450,000	790,000	5,030,000
June	969,000	29,500,000	42,700	1,220,000	278,000	2,310,000	1,080,000	6,110,000
July	741,000	21,800,000	85,500	2,230,000	286,000	3,030,000	900,000	7,010,000
August	694,000	21,300,000	91,700	2,260,000	217,000	1,850,000	825,000	7,840,000
September	1,110,000	36,100,000	105,000	2,770,000	83,600	874,000	1,210,000	9,050,000
October:								
Australia	6,070	277,000	--	--	--	--	6,070	418,000
Belgium	12,700	483,000	7,250	221,000	4,540	55,300	19,100	431,000
Brazil	20,000	636,000	--	--	5,440	83,900	22,200	232,000
Canada	80,500	2,910,000	--	--	--	--	80,500	833,000
China	35,200	1,220,000	32,000	680,000	3,000	24,400	59,100	1,050,000
Congo (Kinshasa)	--	--	--	--	--	--	--	31,000
Cote d'Ivoire	--	--	--	--	--	--	--	2,590
Finland	21,500	1,110,000	44,900	1,290,000	65,300	793,000	76,000	799,000
France	695	46,100	1,050	33,600	--	--	1,450	32,200
Germany	807	92,700	972	63,000	--	--	1,510	19,700
India	--	--	--	--	16,200	106,000	4,370	109,000
Italy	81	6,490	--	--	--	--	81	429
Japan	10,800	422,000	288	14,100	--	--	11,000	131,000
Korea, Republic of	--	--	--	--	--	--	--	5,030
Kyrgyzstan	--	--	--	--	5,760	116,000	2,650	3,390
Morocco	--	--	--	--	--	--	--	227,000
Norway	108,000	3,910,000	--	--	--	--	108,000	1,930,000
Philippines	--	--	--	--	--	--	--	19,500
Russia	204,000	7,140,000	--	--	--	--	204,000	2,260,000
South Africa	5,000	18,700	--	--	42,500	218,000	15,200	137,000
Sweden	498	20,200	--	--	--	--	498	2,680
Switzerland	--	--	--	--	--	--	--	47
Taiwan	--	--	--	--	--	--	--	360
Uganda	21,600	682,000	--	--	--	--	21,600	133,000
United Kingdom	2,320	58,400	16,100	431,000	27,200	406,000	23,200	186,000
Zambia	49,500	1,800,000	--	--	--	--	49,500	765,000
Total	579,000	20,800,000	103,000	2,730,000	170,000	1,800,000	706,000	9,760,000
January-October	8,320,000	246,000,000	947,000	23,100,000	2,150,000	22,700,000	9,760,000	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

³Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁴Customs value.

⁵Estimated from gross weights.

⁶May include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY ¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2005:						
October	10,700	\$372,000	88,200	\$594,000	18,700	\$1,520,000
November	10,100	410,000	100,000	1,090,000	36,900	2,190,000
December	35,200	350,000	53,600	363,000	21,700	1,510,000
January-October	55,800	1,930,000	661,000	6,430,000	197,000	14,000,000
January-December	101,000	2,690,000	815,000	7,880,000	256,000	17,700,000
2006:						
January	385	14,000	59,800	1,090,000	14,600	1,140,000
February	1,380	53,700	68,200	441,000	12,700	1,080,000
March	1,570	74,900	55,200	731,000	25,100	1,940,000
April	1,050	60,800	29,000	421,000	26,700	1,820,000
May	864	78,800	26,800	450,000	23,600	1,690,000
June	233	19,300	149,000	1,780,000	23,300	1,680,000
July	1,950	26,400	47,900	519,000	23,700	1,920,000
August	21,200	676,000	51,300	708,000	18,300	1,470,000
September	447	39,700	54,400	677,000	14,200	1,360,000
October:						
Australia	342	20,200	--	--	--	--
Belgium	1,600	24,800	--	--	--	--
Canada	--	--	877	13,400	1,820	334,000
China	--	--	--	--	85	6,840
Finland	712	77,000	--	--	--	--
France	--	--	6,180	113,000	20	13,600
Germany	--	--	--	--	2,860	117,000
Ireland	--	--	11,000	174,000	--	--
Japan	1,200	74,400	21,500	124,000	1,240	39,600
Netherlands	--	--	--	--	894	71,200
Taiwan	--	--	--	--	9	2,370
Thailand	--	--	--	--	59	2,580
Tunisia	--	--	4,180	72,300	--	--
United Kingdom	--	--	18,600	429,000	9,720	628,000
Total	3,860	196,000	62,200	926,000	16,700	1,210,000
January-October	32,900	1,240,000	604,000	7,740,000	199,000	15,300,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

Source: U.S. Census Bureau.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS¹

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2005:								
October	147,000	\$6,240,000	68,000	\$1,610,000	18,400	\$119,000	201,000	2,090,000
November	103,000	4,030,000	57,700	1,480,000	88,900	390,000	166,000	2,260,000
December	90,100	3,130,000	110,000	2,410,000	49,200	275,000	181,000	2,440,000
January-October	1,480,000	53,400,000	662,000	13,200,000	566,000	3,160,000	2,090,000	XX
January-December	1,670,000	60,600,000	829,000	17,100,000	704,000	3,820,000	2,440,000	XX
2006:								
January	96,100	3,850,000	108,000	2,610,000	51,500	317,000	187,000	187,000
February	96,200	3,960,000	91,800	2,170,000	43,400	308,000	173,000	359,000
March	232,000	9,530,000	93,800	2,030,000	76,300	518,000	318,000	678,000
April	326,000	12,700,000	123,000	2,710,000	19,900	177,000	419,000	1,100,000
May	134,000	4,780,000	83,300	2,060,000	79,800	461,000	213,000	1,310,000
June	157,000	3,980,000	66,000	1,680,000	50,300	111,000	217,000	1,530,000
July	150,000	4,890,000	63,300	1,370,000	33,200	224,000	203,000	1,730,000
August	130,000	3,650,000	91,000	2,180,000	64,900	390,000	211,000	1,940,000
September	165,000	4,500,000	109,000	3,010,000	20,900	163,000	249,000	2,190,000
October	235,000	3,650,000	62,300	1,800,000	15,500	168,000	284,000	2,470,000
January-September	1,720,000	55,500,000	891,000	21,600,000	456,000	2,840,000	2,470,000	XX

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

³Cobalt acetates and cobalt chlorides.

⁴Free alongside ship (f.a.s.) value.

⁵Estimated from gross weights.

⁶Year to date may include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES¹

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value ²	Quantity	Value ²
2005:				
October	222,000	\$8,360,000	41,800	\$1,050,000
November	216,000	8,370,000	--	--
December	204,000	8,800,000	69,200	562,000
January-October	1,920,000	74,700,000	660,000	11,600,000
January-December	2,340,000	91,800,000	729,000	12,100,000
2006:				
January	188,000	7,160,000	5,150	129,000
February	157,000	7,530,000	6,390	139,000
March	219,000	8,340,000	28,000	893,000
April	183,000	8,250,000	69,200	1,170,000
May	115,000	5,260,000	19,700	493,000
June	112,000	6,110,000	31,800	423,000
July	130,000	7,020,000	81,200	1,320,000
August	140,000	6,350,000	6,690	162,000
September	165,000	8,040,000	107,000	585,000
October	178,000	8,400,000	59,700	1,410,000
January-October	1,590,000	72,500,000	415,000	6,720,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Free alongside ship (f.a.s.) value.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.